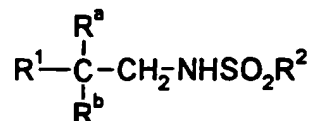


-60-

We Claim:

1. A compound of the formula:



5

wherein

one or both of R^a and R^b are selected independently from F, CF₃ and -OR^c wherein R^c is hydrogen or (1-4C)alkyl, and any remainder is hydrogen; or R^a and R^b together represent =O or =CH₂;

10

R¹ represents a naphthyl group or a phenyl, furyl, thienyl or pyridyl group which is unsubstituted or substituted by one or two substituents selected independently from halogen; nitro; cyano; hydroxyimino; (1-10C)alkyl; (2-10C)alkenyl; (2-10C)alkynyl; (3-8C)cycloalkyl; hydroxy(3-8C)cycloalkyl; oxo(3-8C)cycloalkyl; halo(1-10C)alkyl; (CH₂)_yX¹R⁹ in which y is 0 or an integer of from 1 to 4, X¹ represents O, S, NR¹⁰, CO, COO, OCO, CONR¹¹, NR¹²CO, NR¹²COCOO or OCONR¹³, R⁹ represents hydrogen, (1-10C)alkyl, (3-10C)alkenyl, (3-10C)alkynyl, pyrrolidinyl, tetrahydrofuryl, morpholino or (3-8C)cycloalkyl and R¹⁰, R¹¹, R¹² and R¹³ each independently represents hydrogen or (1-10C)alkyl, or R⁹ and R¹⁰, R¹¹, R¹² or R¹³ together with the nitrogen atom to which they are attached form an azetidiny, pyrrolidinyl, piperidinyl or morpholino group; N-(1-4C)alkylpiperazinyl; N-phenyl(1-4C)alkylpiperazinyl; thienyl; furyl; oxazolyl; isoxazolyl; pyrazolyl; imidazolyl; thiazolyl; pyridyl; pyridazinyl; pyrimidinyl; dihydrothienyl; dihydrofuryl; dihydrothiopyranyl; dihydropyranyl; dihydrothiazolyl; (1-4C)alkoxycarbonyldihydrothiazolyl; (1-

30

-61-

4C)alkoxycarbonyldimethyldihydrothiazolyl; tetrahydro-
thienyl; tetrahydrofuryl; tetrahydrothiopyranyl;
tetrahydropyranyl; indolyl; benzofuryl; benzothienyl;
benzimidazolyl; and a group of formula $R^{14}-(L^a)_n-X^2-(L^b)_m$ in
5 which X^2 represents a bond, O, NH, S, SO, SO₂, CO, CH(OH),
CONH, NHCO, NHCONH, NHCOO, COCONH, OCH₂CONH or CH=CH, L^a and
 L^b each represent (1-4C)alkylene, one of n and m is 0 or 1
and the other is 0, and R^{14} represents a phenyl or
heteroaromatic group which is unsubstituted or substituted
10 by one or two of halogen, nitro, cyano, hydroxyimino, (1-
10C) alkyl, (2-10C)alkenyl, (2-10C)alkynyl, (3-8C)-
cycloalkyl, 4-(1,1-dioxotetrahydro-1,2-thiazinyl), halo(1-
10C)alkyl, cyano(2-10C)alkenyl, phenyl, and $(CH_2)_zX^3R^{15}$ in
which z is 0 or an integer of from 1 to 4, X^3 represents O,
15 S, NR^{16} , CO, CH(OH), COO, OCO, $CONR^{17}$, $NR^{18}CO$, $NHSO_2$,
 $NHSO_2NR^{17}$, NHCONH, $OCOR^{19}$ or $NR^{19}COO$, R^{15} represents
hydrogen, (1-10C)alkyl, phenyl(1-4C)alkyl, (1-10C)haloalkyl,
(1-4C)alkoxycarbonyl(1-4C)alkyl, (1-4C)alkylsulfonylamino(1-
4C)alkyl, (N-(1-4C)alkoxycarbonyl)(1-4C)alkylsulfonylamino-
20 (1-4C)alkyl, (3-10C)alkenyl, (3-10C)alkynyl, (3-8C)-
cycloalkyl, camphoryl or an aromatic or heteroaromatic group
which is unsubstituted or substituted by one or two of
halogen, (1-4C)alkyl, halo(1-4C)alkyl, di(1-4C)alkylamino
and (1-4C)alkoxy and R^{16} , R^{17} , R^{18} and R^{19} each
25 independently represents hydrogen or (1-10C)alkyl, or R^{15}
and R^{16} , R^{17} , R^{18} or R^{19} together with the nitrogen atom to
which they are attached form an azetidiny, pyrrolidinyl,
piperidinyl or morpholino group; and
30 R^2 represents (1-6C)alkyl, (3-6C)cycloalkyl, (1-6C)fluoro-
alkyl, (1-6C)chloroalkyl, (2-6C)alkenyl, (1-4C)alkoxy(1-
4C)alkyl, phenyl which is unsubstituted or substituted by

-62-

halogen, (1-4C)alkyl or (1-4C)alkoxy, or a group of formula R^3R^4N in which R^3 and R^4 each independently represents (1-4C)alkyl or, together with the nitrogen atom to which they are attached form an azetidiny, pyrrolidinyl, piperidinyl, morpholino, piperazinyl, hexahydroazepinyl or octahydroazocinyl group; or a pharmaceutically acceptable salt thereof.

2. A compound as claimed in Claim 1, wherein R^a represents F, CF_3 or methoxy and R^b represents hydrogen; or R^a and R^b together represent $=O$ or $=CH_2$.

3. A compound as claimed in Claim 2, wherein R^a represents methoxy and R^b represents hydrogen.

15

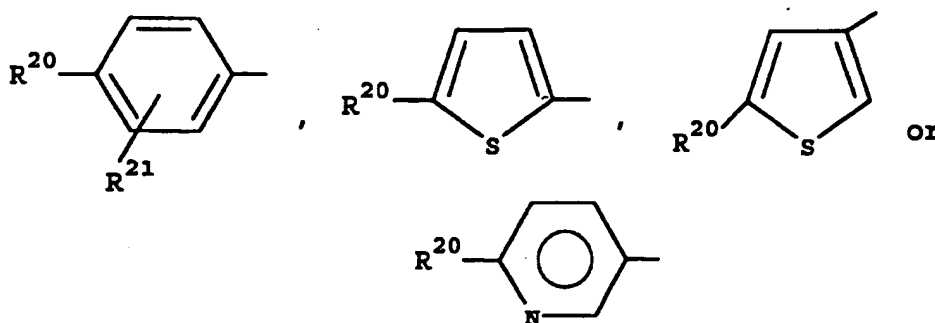
4. A compound as claimed in any one of Claims 1 to 3 wherein R^2 represents (1-6C)alkyl, (1-6C)fluoroalkyl, (2-6C)alkenyl, or a group of formula R^3R^4N in which R^3 and R^4 each independently represents (1-4C)alkyl or, together with the nitrogen atom to which they are attached form an azetidiny, pyrrolidinyl, piperidinyl, morpholino, piperazinyl, hexahydroazepinyl or octahydroazocinyl group.

5. A compound as claimed in Claim 4, wherein R^2 represents methyl, ethyl, propyl, 2-propyl, butyl, 2-methylpropyl, cyclohexyl, trifluoromethyl, 2,2,2-trifluoroethyl, chloromethyl, ethenyl, prop-2-enyl, methoxyethyl, phenyl, 4-fluorophenyl, or dimethylamino.

6. A compound as claimed in Claim 5, wherein R^2 represents ethyl, 2-propyl or dimethylamino.

-63-

7. A compound as claimed in any one of Claims 1 to 6, wherein R^1 represents 2-naphthyl or a group of formula



5 in which

R^{20} represents halogen; nitro; cyano; hydroxyimino; (1-10C)alkyl; (2-10C)alkenyl; (2-10C)alkynyl; (3-8C)cycloalkyl; hydroxy(3-8C)cycloalkyl; oxo(3-8C)cycloalkyl; halo(1-10C)alkyl; $(CH_2)_yX^1R^9$ in which y is 0 or an integer of from 1 to 4, X^1 represents O, S, NR^{10} , CO, COO, OCO, $CONR^{11}$, $NR^{12}CO$, $NR^{12}COCOO$ or ONR^{13} , R^9 represents hydrogen, (1-10C)alkyl, (3-10C)alkenyl, (3-10C)alkynyl, pyrrolidinyl, tetrahydrofuryl, morpholino or (3-8C)cycloalkyl and R^{10} , R^{11} , R^{12} and R^{13} each independently represents hydrogen or (1-10C)alkyl, or R^9 and R^{10} , R^{11} , R^{12} or R^{13} together with the nitrogen atom to which they are attached form an azetidiny, pyrrolidinyl, piperidinyl or morpholino group; N-(1-4C)alkylpiperazinyl; N-phenyl(1-4C)alkylpiperazinyl; thienyl; furyl; oxazolyl; isoxazolyl; pyrazolyl; imidazolyl; thiazolyl; pyridyl; pyridazinyl; pyrimidinyl; dihydrothienyl; dihydrofuryl; dihydrothiopyranyl; dihydropyranyl; dihydrothiazolyl; (1-4C)alkoxycarbonyldihydrothiazolyl; (1-4C)alkoxycarbonyldimethyldihydrothiazolyl; tetrahydrothienyl; tetrahydrofuryl; tetrahydrothiopyranyl; tetrahydropyranyl; indolyl; benzofuryl; benzothienyl; benzimidazolyl; and a group of formula $R^{14}-(L^a)_n-X^2-(L^b)_m$ in

-64-

- which X^2 represents a bond, O, NH, S, SO, SO₂, CO, CH(OH), CONH, NHCO, NHCONH, NHCOO, COCONH, OCH₂CONH or CH=CH, L^a and L^b each represent (1-4C)alkylene, one of n and m is 0 or 1 and the other is 0, and R¹⁴ represents a phenyl or
- 5 heteroaromatic group which is unsubstituted or substituted by one or two of halogen; nitro; cyano; hydroxyimino, (1-10C)alkyl; (2-10C)alkenyl; (2-10C)alkynyl; (3-8C)cycloalkyl; 4-(1,1-dioxotetrahydro-1,2-thiazinyl), halo(1-10C)alkyl; cyano(2-10C)alkenyl, phenyl, (CH₂)_zX³R¹⁵ in which z is 0 or
- 10 an integer of from 1 to 4, X³ represents O, S, NR¹⁶, CO, CH(OH), COO, OCO, CONR¹⁷, NR¹⁸CO, NHSO₂, NHSO₂NR¹⁷, NHCONH, OCONR¹⁹ or NR¹⁹COO, R¹⁵ represents hydrogen, (1-10C)alkyl, phenyl(1-4C)alkyl, (1-10C)haloalkyl, (1-4C)alkoxycarbonyl(1-4C)alkyl, (1-4C)alkylsulfonylamino(1-4C)alkyl, (N-(1-
- 15 4C)alkoxycarbonyl)(1-4C)alkylsulfonylamino(1-4C)alkyl, (3-10C)alkenyl, (3-10C)alkynyl, (3-8C)cycloalkyl, camphoryl or an aromatic or heteroaromatic group which is unsubstituted or substituted by one or two of halogen, (1-4C)alkyl, halo(1-4C)alkyl, di(1-4C)alkylamino and (1-4C)alkoxy and
- 20 R¹⁶, R¹⁷, R¹⁸ and R¹⁹ each independently represents hydrogen or (1-10C)alkyl, or R¹⁵ and R¹⁶, R¹⁷, R¹⁸ or R¹⁹ together with the nitrogen atom to which they are attached form an azetidiny, pyrrolidinyl, piperidinyl or morpholino group; and
- 25 R²¹ represents a hydrogen atom, a halogen atom, a (1-4C)alkyl group or a (1-4C)alkoxy group.
8. A compound according to claim 1 wherein R^a is F and R^b is hydrogen.
- 30 9. A compound according to claim 1 wherein R^a is F and R^b is F.

-65-

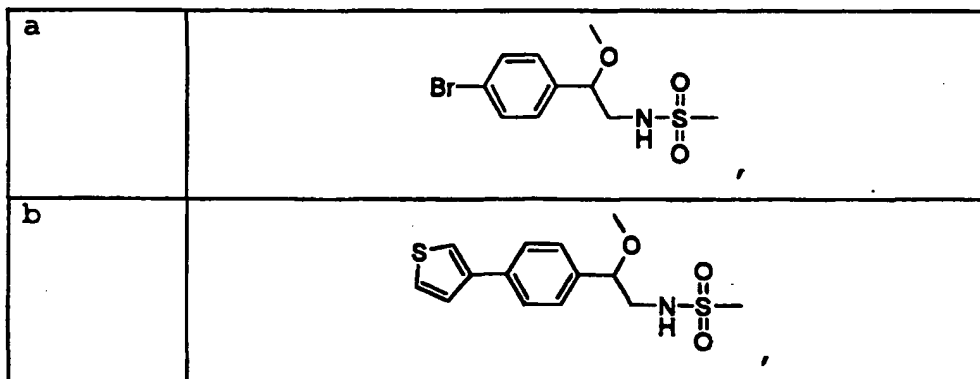
10. A compound according to claim 9 wherein R² is isopropyl.

5 11. A compound according to claim 10 wherein R² is isopropyl.

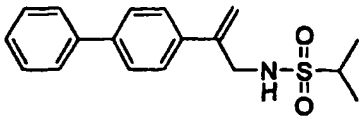
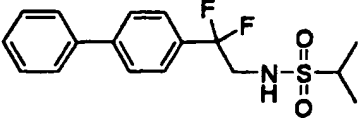
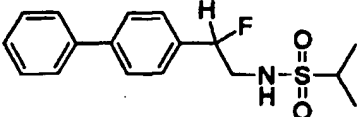
12. A compound as claimed in Claim 7, wherein R¹ represents 2-naphthyl, 4-bromophenyl, 4-benzamidophenyl, 4-methyl-
10 phenyl, 4-isopropylphenyl, 4-isobutylphenyl, 4-t-butylphenyl, 4-methoxyphenyl, 4-isopropoxyphenyl, 4-cyclopentylphenyl, 4-cyclohexylphenyl, 4-(2-hydroxymethylphenyl)phenyl, 4-(4-hydroxymethylphenyl)phenyl, 4-(2-furyl)phenyl, 4-(3-furyl)phenyl, 4-(2-thienyl)phenyl, 4-(3-thienyl)phenyl, 4-(pyrrolidin-1-yl)phenyl, 4-(piperidin-1-yl)phenyl, 3-chloro-4-piperidin-1-ylphenyl, 4-benzyloxyphenyl, 4-(2-fluorophenyl)phenyl, 4-(3-fluorophenyl)phenyl, 4-(2-formylphenyl)phenyl, 4-(3-formylphenyl)phenyl, 4-(4-formylphenyl)phenyl, 4-(4-methylphenyl)phenyl, 4-(4-hydroxyphenyl)phenyl, 4-(2-methoxyphenyl)phenyl or 4-(4-methoxyphenyl)phenyl.

15
20

13. A compound selected from the group consisting of:



-66-

c	
d	 , and
e	

and the pharmaceutically acceptable salts thereof.

14. A pharmaceutical composition, which comprises a
 5 compound as claimed in Claim 1 and a pharmaceutically
 acceptable diluent or carrier.

15. A method of potentiating glutamate receptor function in
 a mammal requiring such treatment, which comprises
 10 administering an effective amount of a compound as claimed
 in Claim 1.

16. A method of treating a cognitive disorder; a neuro-
 degenerative disorder; age-related dementia; age-induced
 15 memory impairment; movement disorder; reversal of a drug-
 induced state; depression; attention deficit disorder;
 attention deficit hyperactivity disorder; psychosis;
 cognitive deficits associated with psychosis; or drug-
 induced psychosis in a patient, which comprises
 20 administering to a patient in need thereof an effective
 amount of a compound as claimed in Claim 1.

-67-

17. A method for improving memory or learning ability in a patient, which comprises administering to a patient in need thereof an effective amount of a compound as claimed in Claim 1.